

REMARKS/ARGUMENTS

The amendments to Claim 1 are supported by the claim as originally filed, by specification page 2, lines 5-6, by specification page 3, line 9 – page 6, line 12, and by the paragraph bridging specification pages 6-7. The amendment to Claim 5 is supported by the description of formula (I) therein, also appearing at specification page 3, lines 16-27. Other amendments are formal in nature and/or are provided so as to conform with the amendments to Claim 1. No new matter has been entered.

The above amendments to the claims address the rejections presented under 35 USC 112. The rejection should be withdrawn.

The rejection of the claims as obvious over Hardinghaus in view of Amirzadeh is traversed.

Hardinghaus relates to micronized barium sulfate having a primary grain diameter of less than or equal to  $0.1\mu\text{m}$  [0007] optionally containing a wetting or dispersing agent [0021] selected from various materials described in the reference [0023] and including short chain polyacrylates, polyethers such as polyglycol ethers, etc. These “dispersing agents or wetting agents” of Hardinghaus overlap, to some extent, with the crystallization inhibitors of the present invention. See, for example, specification page 3, lines 9ff.<sup>1</sup> Regardless what one calls the agent added to the barium sulfate in Hardinghaus, the reference fails to disclose or suggest the use of both a crystallization inhibitor and a dispersant, as presently claimed, and further fails to disclose or suggest Applicant’s presently claimed dispersants. See, e.g., the paragraph bridging specification pages 4 and 5 and specification page 5, lines 10 ff.

Hardinghaus’ lack of the use of a dispersant as presently claimed leads to significant aggregation problems: as shown at, e.g., specification page 25ff, when a crystallization inhibitor is used without any dispersant the mean primary particle sizes obtained range from,

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<sup>1</sup> This is not surprising as crystallization inhibitors useful herein include those specified in WO 01/92157 (see specification page 3, line 15).

e.g., 16 to 40 nm, with mean secondary particle sizes of 142 to 1588 nm, denoting huge aggregates. For example, note Example 3 of Hardinghaus and compare this with the entry at page 25, bottom, of the present specification showing that the material used by Hardinghaus provides a mean primary particle size of 28 nm and a mean secondary particle size of 167 nm. Clearly, the barium sulfate particles according to Hardinghaus' disclosure would be in a clearly agglomerated state whereas, on the contrary, the barium sulfate of the present invention is in a form of smaller (or no) agglomerates. For further support, see Example 2 herein at specification page 27 showing secondary particle sizes less than 80 nm and, e.g., Examples 3.1 to 3.3 showing primary particle sizes of approximately 10 to 20 nm and secondary particles within the same range. Such barium sulfate particles clearly are essentially free of agglomerates.

The problem of agglomeration is not addressed by Hardinghaus, whose purpose is the preparation of micronized barium sulfate having a small primary particle size. Amirzadeh does not alter or correct this situation, as the reference is directed to barium sulfate particles having an average particle diameter of from 0.1 to 10  $\mu\text{m}$  achieved by coating the barium sulfate with an additive as described in paragraph [0012] of the reference. As noted by the Examiner at page 4 of the Official Action, these materials are considered to be crystallization inhibitors, and thus do no supplement or make up for that lacking in Hardinghaus in meeting the present claims, first because the size of the particles in the two references are different, and second because even the combination of references fails to disclose or suggest the use of both a crystallization inhibitor and a dispersant which are different from one another.

Tertiary reference D'Muhala fails to make up for that lacking in both Hardinghaus and Amirzadeh as D'Muhala relates to solubilizing barium sulfate to enable its removal from a surface. See, e.g., column 2, lines 44-50. One of ordinary skill in the art would not be motivated to use an agent directed at the solubilization of barium sulfate in the preparation of

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particulate barium sulfate. Bunnomori and Pirrung, both cited against pending Claims 11 and 14-16, similarly fail to make up for that lacking in the primary, secondary and tertiary references even if they are assumed to stand for the propositions put forth in the Official Action, as none of the references, even taken in full combination, disclose or suggest Applicants' invention as described in amended Claim 1. Because nothing in even the combination of references would lead one of ordinary skill in the art to what Applicants claim herein, Applicants respectfully request the reconsideration and withdrawal of the outstanding rejections.

Finally, and with regard to the double patenting rejections, Applicants note that all copending applications cited are later-filed applications. Accordingly, and as specified in MPEP 804, Applicants respectfully request that this application be passed to Issue in order to fix the claimed subject matter herein and that any remaining double patenting issues be carried over to the copending applications. If the Examiner finds this case to be in condition for allowance but for the presence of a Terminal Disclaimer, the Examiner is requested to contact the undersigned attorney by telephone.

Accordingly, and in view of the above amendment and remarks, Applicants respectfully request the withdrawal of all outstanding rejections, and the passage of this case to Issue.

Respectfully submitted,

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